

1
SEQUENCE LISTING

<110> NOVIMMUNE SA c/o MEDABIOTECH SA

<120> NEW TRANSCRIPTION FACTOR OF MHC CLASS II GENES,
SUBSTANCES CAPABLE OF INHIBITING THIS NEW TRANSCRIPTION
FACTOR AND MEDICAL USES OF THESE SUBSTANCES

<130> B3991A-GD/LL

<140> PCT/EP

<141> 1999-10-22

<150> 98120085.0

<151> 1998-10-24

<160> 19

<170> PatentIn Ver. 2.1

<210> 1

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 1

ccgtacgcgt ctagaccatg gagcttaccc agcctgcaga

40

<210> 2

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 2

ttcgaattct cgagtgtctg agtccccggc a

31

<210> 3

<211> 37

<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 3
ccgtacgcgt ctagaccatg gagcccactc aggttgc

37

<210> 4
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 4
ttcgaattct cgagtgccctg ggttccagca gg

32

<210> 5
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 5
ccagctctag actccaccac tctcaccaac

30

<210> 6
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 6
ccttcgaatt ctcgctcttt tgccaggatg

30

<210> 7
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 7
ggttctctag attggcagca ctggggatag

30

<210> 8
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 8
gctacgaatt ccagcagaca cagccaaaac

30

<210> 9
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 9
ccgtacgcgt ctagaatgga ttacaaagac gatgacgata agatggagct taccaggcct 60
gcagaagac

69

<210> 10
<211> 1345
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (418)..(1200)

<400> 10
acgcagggaa ggagggcacac ccgggggtgg cgcaagtggagg agggggcgcg acggccagga 60
ggctgggtgga gcgacacccca ggcaggagag gggaaagaac tctctccctt tctgaacccc 120

ctttccttg agagacgagt tgggggagtc ctccacgcatac tacccactcg ggccgcaaaa 180
 actcccttct ttagccctct gcggccgccc ttgcttataa gcctttgaga ccgcagaagg 240
 gagcttgttg tggaacggga cggccaagag gaagccagat cgctgagggt ccggtctcca 300
 gtttgcctcc tgctatatcc atttggaaagag aaaagtttgt gacttgggcc cccaaagtttt 360
 gagagaactg ggcttcggc gcggggggac agaggaggct cgtggggagc tttcccc 417
 atg gag ctt acc cag cct gca gaa gac ctc atc cag acc cag cag acc 465
 Met Glu Leu Thr Gln Pro Ala Glu Asp Leu Ile Gln Thr Gln Gln Thr
 1 5 10 15

cct gcc tca gaa ctt ggg gac cct gaa gac ccc gga gag gag gct gca 513
 Pro Ala Ser Glu Leu Gly Asp Pro Glu Asp Pro Gly Glu Glu Ala Ala
 20 25 30

gat ggc tca gac act gtg gtc ctc agt ctc ttt ccc tgc acc cct gag 561
 Asp Gly Ser Asp Thr Val Val Leu Ser Leu Phe Pro Cys Thr Pro Glu
 35 40 45

cct gtg aat cct gaa ccg gat gcc agt gtt tcc tct cca cag gca ggc 609
 Pro Val Asn Pro Glu Pro Asp Ala Ser Val Ser Ser Pro Gln Ala Gly
 50 55 60

agc tcc ctg aag cac tcc acc act ctc acc aac ccg cag cga ggg aac 657
 Ser Ser Leu Lys His Ser Thr Thr Leu Thr Asn Arg Gln Arg Gly Asn
 65 70 75 80

gag gtg tca gct ctg ccg gcc acc cta gac tcc ctg tcc atc cac cag 705
 Glu Val Ser Ala Leu Pro Ala Thr Leu Asp Ser Leu Ser Ile His Gln
 85 90 95

ctc gca gca cag ggg gag ctg gac cag ctg aag gag cat ttg cgg aaa 753
 Leu Ala Ala Gln Gly Glu Leu Asp Gln Leu Lys Glu His Leu Arg Lys
 100 105 110

ggt gac aac ctc gtc aac aag cca gac gag cgc ggc ttc acc ccc ctc 801
 Gly Asp Asn Leu Val Asn Lys Pro Asp Glu Arg Gly Phe Thr Pro Leu
 115 120 125

atc tgg gcc tcc gcc ttt gga gag att gag acc gtt cgc ttc ctg ctg 849
 Ile Trp Ala Ser Ala Phe Gly Glu Ile Glu Thr Val Arg Phe Leu Leu
 130 135 140

gag tgg ggt gcc gac ccc cac atc ctg gca aaa gag cga gag agc gcc 897
 Glu Trp Gly Ala Asp Pro His Ile Leu Ala Lys Glu Arg Glu Ser Ala

145

150

5

155

160

ctg tcg ctg gcc agc aca ggc ggc tac aca gac att gtg ggg ctg ctg 945
 Leu Ser Leu Ala Ser Thr Gly Gly Tyr Thr Asp Ile Val Gly Leu Leu
 165 170 175

ctg gag cgt gac gtg gac atc aac atc tat gat tgg aat gga ggg acg 993
 Leu Glu Arg Asp Val Asp Ile Asn Ile Tyr Asp Trp Asn Gly Gly Thr
 180 185 190

cca ctg ctg tac gct gtg cgc ggg aac cac gtg aaa tgc gtt gag gcc 1041
 Pro Leu Leu Tyr Ala Val Arg Gly Asn His Val Lys Cys Val Glu Ala
 195 200 205

ttg ctg gcc cga ggc gct gac ctc acc acc gaa gcc gac tct ggc tac 1089
 Leu Leu Ala Arg Gly Ala Asp Leu Thr Thr Glu Ala Asp Ser Gly Tyr
 210 215 220

acc ccg atg gac ctt gcc gtg gcc ctg gga tac cgg aaa gtg caa cag 1137
 Thr Pro Met Asp Leu Ala Val Ala Leu Gly Tyr Arg Lys Val Gln Gln
 225 230 235 240

gtg atc gag aac cac atc ctc aag ctc ttc cag agc aac ctg gtg ccc 1185
 Val Ile Glu Asn His Ile Leu Lys Leu Phe Gln Ser Asn Leu Val Pro
 245 250 255

gct gac cct gag tga aggccgcctg ccggggactc agacactcag ggaacaaaat 1240
 Ala Asp Pro Glu
 260

ggtcagccag agctggggaa acccagaact gacttcaaag gcagcttctg gacaggtgg 1300

gggaggggac cttcccaag aggaaccaat aaaccttctg tgtag 1345

<210> 11
<211> 260
<212> PRT
<213> Homo sapiens

<400> 11
Met Glu Leu Thr Gln Pro Ala Glu Asp Leu Ile Gln Thr Gln Gln Thr
1 5 10 15

Pro Ala Ser Glu Leu Gly Asp Pro Glu Asp Pro Gly Glu Glu Ala Ala
20 25 30

Asp Gly Ser Asp Thr Val Val Leu Ser Leu Phe Pro Cys Thr Pro Glu

35

40

45

Pro Val Asn Pro Glu Pro Asp Ala Ser Val Ser Ser Pro Gln Ala Gly
50 55 60

Ser Ser Leu Lys His Ser Thr Thr Leu Thr Asn Arg Gln Arg Gly Asn
65 70 75 80

Glu Val Ser Ala Leu Pro Ala Thr Leu Asp Ser Leu Ser Ile His Gln
85 90 95

Leu Ala Ala Gln Gly Glu Leu Asp Gln Leu Lys Glu His Leu Arg Lys
100 105 110

Gly Asp Asn Leu Val Asn Lys Pro Asp Glu Arg Gly Phe Thr Pro Leu
115 120 125

Ile Trp Ala Ser Ala Phe Gly Glu Ile Glu Thr Val Arg Phe Leu Leu
130 135 140

Glu Trp Gly Ala Asp Pro His Ile Leu Ala Lys Glu Arg Glu Ser Ala
145 150 155 160

Leu Ser Leu Ala Ser Thr Gly Tyr Thr Asp Ile Val Gly Leu Leu
165 170 175

Leu Glu Arg Asp Val Asp Ile Asn Ile Tyr Asp Trp Asn Gly Gly Thr
180 185 190

Pro Leu Leu Tyr Ala Val Arg Gly Asn His Val Lys Cys Val Glu Ala
195 200 205

Leu Leu Ala Arg Gly Ala Asp Leu Thr Thr Glu Ala Asp Ser Gly Tyr
210 215 220

Thr Pro Met Asp Leu Ala Val Ala Leu Gly Tyr Arg Lys Val Gln Gln
225 230 235 240

Val Ile Glu Asn His Ile Leu Lys Leu Phe Gln Ser Asn Leu Val Pro
245 250 255

Ala Asp Pro Glu
260

<210> 12
<211> 260
<212> PRT
<213> Homo sapiens

<400> 12
Met Glu Leu Thr Gln Pro Ala Glu Asp Leu Ile Gln Thr Gln Gln Thr
1 5 10 15

Pro Ala Ser Glu Leu Gly Asp Pro Glu Asp Pro Gly Glu Glu Ala Ala
20 25 30

Asp Gly Ser Asp Thr Val Val Leu Ser Leu Phe Pro Cys Thr Pro Glu
35 40 45

Pro Val Asn Pro Glu Pro Asp Ala Ser Val Ser Ser Pro Gln Ala Gly
50 55 60

Ser Ser Leu Lys His Ser Thr Thr Leu Thr Asn Arg Gln Arg Gly Asn
65 70 75 80

Glu Val Ser Ala Leu Pro Ala Thr Leu Asp Ser Leu Ser Ile His Gln
85 90 95

Leu Ala Ala Gln Gly Glu Leu Asp Gln Leu Lys Glu His Leu Arg Lys
100 105 110

Gly Asp Asn Leu Val Asn Lys Pro Asp Glu Arg Gly Phe Thr Pro Leu
115 120 125

Ile Trp Ala Ser Ala Phe Gly Glu Ile Glu Thr Val Arg Phe Leu Leu
130 135 140

Glu Trp Gly Ala Asp Pro His Ile Leu Ala Lys Glu Arg Glu Ser Ala
145 150 155 160

Leu Ser Leu Ala Ser Thr Gly Gly Tyr Thr Asp Ile Val Gly Leu Leu
165 170 175

Leu Glu Arg Asp Val Asp Ile Asn Ile Tyr Asp Trp Asn Gly Gly Thr
180 185 190

Pro Leu Leu Tyr Ala Val Arg Gly Asn His Val Lys Cys Val Glu Ala
195 200 205

Leu Leu Ala Arg Gly Ala Asp Leu Thr Thr Glu Ala Asp Ser Gly Tyr
 210 215 220

Thr Pro Met Asp Leu Ala Val Ala Leu Gly Tyr Arg Lys Val Gln Gln
 225 230 235 240

Val Ile Glu Asn His Ile Leu Lys Leu Phe Gln Ser Asn Leu Val Pro
 245 250 255

Ala Asp Pro Glu
 260

<210> 13

<211> 269

<212> PRT

<213> Murinae gen. sp.

<400> 13

Met Glu Pro Thr Gln Val Ala Glu Asn Leu Val Pro Asn Gln Gln Pro
 1 5 10 15

Pro Val Pro Asp Leu Glu Asp Pro Glu Asp Thr Arg Asp Glu Ser Pro
 20 25 30

Glu Asn Ser Asp Thr Val Val Leu Ser Leu Phe Pro Cys Thr Pro Asp
 35 40 45

Ala Val Asn Pro Glu Ala Asp Ala Ser Ala Ser Ser Leu Gln Gly Ser
 50 55 60

Phe Leu Lys His Ser Thr Thr Leu Thr Asn Arg Gln Arg Gly Asn Glu
 65 70 75 80

Val Ser Ala Leu Pro Ala Thr Leu Asp Ser Leu Ser Ile His Gln Leu
 85 90 95

Ala Ala Gln Gly Glu Leu Ser Gln Leu Lys Asp His Leu Arg Lys Gly
 100 105 110

Ala Cys Pro Ala Cys Thr Cys Leu Ser Gly Asn Asn Leu Ile Asn Lys
 115 120 125

Pro Asp Glu Arg Gly Phe Thr Pro Leu Ile Trp Ala Ser Ala Phe Gly
 130 135 140

Glu Ile Glu Thr Val Arg Phe Leu Leu Asp Trp Gly Ala Asp Pro His
 145 150 155 160

Ile Leu Ala Lys Glu Arg Glu Ser Ala Leu Ser Leu Ala Ser Met Gly
 165 170 175

Gly Tyr Thr Asp Ile Val Arg Leu Leu Leu Asp Arg Asp Val Asp Ile
 180 185 190

Asn Ile Tyr Asp Trp Asn Gly Gly Thr Pro Leu Leu Tyr Ala Val Arg
 195 200 205

Gly Asn His Val Lys Cys Val Glu Ala Leu Leu Ala Arg Gly Ala Asp
 210 215 220

Leu Thr Thr Glu Ala Asp Ser Gly Tyr Thr Pro Met Asp Leu Ala Val
 225 230 235 240

Ala Leu Gly Tyr Arg Lys Val Gln Gln Val Met Glu Ser His Ile Leu
 245 250 255

Arg Leu Phe Gln Ser Thr Leu Gly Pro Val Asp Pro Glu
 260 265

<210> 14
<211> 111
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)...(111)

<400> 14
acc cta gac tgg tgc cga ccc cca cat cct ggc aaa aga gcg aga gag 48
Thr Leu Asp Trp Cys Arg Pro Pro His Pro Gly Lys Arg Ala Arg Glu
 1 5 10 15

cgc cct gtc gct ggc cag cac agg cgg cta cac aga cat tgt ggg gct 96
Arg Pro Val Ala Gly Gln His Arg Arg Leu His Arg His Cys Gly Ala
 20 25 30

gct gct gga gcg tga
Ala Ala Gly Ala
 35 111

<210> 15
<211> 37

<212> PRT

<213> Homo sapiens

<400> 15

Thr Leu Asp Trp Cys Arg Pro Pro His Pro Gly Lys Arg Ala Arg Glu
1 5 10 15

Arg Pro Val Ala Gly Gln His Arg Arg Leu His Arg His Cys Gly Ala
20 25 30

Ala Ala Gly Ala

35

<210> 16

<211> 42

<212> DNA

<213> Homo sapiens

<220>

<221> exon

<222> (31)..(42)

<400> 16

ctgggttat tgcccgccctc ctccctgccag gtg aca acc tcg

42

<210> 17

<211> 74

<212> DNA

<213> Homo sapiens

<220>

<221> exon

<222> (1)..(27)

<400> 17

gag acc gtt cgc ttc ctg ctg gag tgg gtgcgtcccc gcccagctgg

47

gcagactgggg ggttcccggg ggccctta

74

<210> 18

<211> 220

<212> PRT

<213> Homo sapiens

<400> 18

Asn Ala Phe Asn Val Phe Thr Phe Val Phe His Leu Ala Glu Cys Asn
1 5 10 15

Ile His Thr Ser Pro Ser Pro Gly Ile Gln Val Arg His Val Xaa Thr
20 25 30

Pro Ser Thr Thr Lys His Phe Ser Pro Ile Lys Gln Ser Thr Thr Leu
35 40 45

Thr Asn Lys His Arg Gly Asn Glu Val Ser Thr Thr Pro Leu Leu Ala
50 55 60

Asn Ser Leu Ser Val His Gln Leu Ala Ala Gln Gly Glu Met Leu Tyr
65 70 75 80

Leu Ala Thr Arg Ile Glu Gln Glu Asn Val Ile Asn His Thr Asp Glu
85 90 95

Glu Gly Phe Thr Pro Leu Met Trp Ala Ala Ala His Gly Gln Ile Ala
100 105 110

Val Val Glu Phe Leu Leu Gln Asn Gly Ala Asp Pro Gln Leu Leu Gly
115 120 125

Lys Gly Arg Glu Ser Ala Leu Ser Leu Ala Cys Ser Lys Gly Tyr Thr
130 135 140

Asp Ile Val Xaa Met Leu Leu Asp Cys Gly Val Asp Val Asn Xaa Tyr
145 150 155 160

Asp Trp Asn Gly Gly Thr Pro Leu Leu Tyr Ala Val His Gly Asn His
165 170 175

Val Lys Cys Val Lys Met Leu Leu Glu Ser Gly Ala Asp Pro Thr Ile
180 185 190

Glu Thr Asp Ser Gly Tyr Asn Ser Met Asp Leu Ala Val Ala Leu Gly
195 200 205

Ile Glu Val Phe Asn Arg Leu Leu Ser His Ile Cys
210 215 220

<210> 19
<211> 218
<212> PRT
<213> Murinae gen. sp.

<400> 19 12
Ala Ser Val Leu Phe Lys Ala Glu Cys Asn Ile His Thr Ser Pro Ser
1 5 10 15

Pro Gly Ile Gln Val Arg His Val Tyr Thr Pro Ser Thr Thr Lys His
20 25 30

Phe Ser Pro Ile Lys Gln Ser Thr Thr Leu Thr Asn Lys His Arg Gly
35 40 45

Asn Glu Val Ser Thr Thr Pro Leu Leu Ala Asn Ser Leu Ser Ala His
50 55 60

Gln Leu Ala Ala Gln Gly Glu Met Leu Tyr Leu Ala Thr Arg Ile Glu
65 70 75 80

Gln Glu Asn Val Ile Asn His Thr Asp Glu Glu Gly Phe Thr Pro Leu
85 90 95

Met Trp Ala Ala Ala His Gly Gln Ile Ala Val Val Glu Phe Leu Leu
100 105 110

Gln Asn Gly Ala Asp Pro Gln Leu Leu Gly Lys Gly Arg Glu Ser Ala
115 120 125

Leu Ser Leu Ala Cys Ser Lys Gly Tyr Thr Asp Ile Val Lys Met Leu
130 135 140

Leu Asp Cys Gly Val Asp Val Asn Glu Tyr Asp Trp Asn Gly Gly Thr
145 150 155 160

Pro Leu Leu Tyr Ala Gly His Gly Asn His Val Lys Cys Val Lys Met
165 170 175

Leu Leu Glu Asn Gly Ala Asp Pro Thr Ile Glu Thr Asp Ser Gly Tyr
180 185 190

Asn Ser Met Asp Leu Ala Val Ala Leu Gly Ile Glu Gly Cys Ser Asp
195 200 205

Tyr Met Leu Val Thr Asp Val Phe Arg Ile
210 215